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WHAT IS CLAIMED IS:

1   1.   A method for processing a source document in a structured document format

2 including elements providing source content to render, wherein the source content comprises

3 code that is rasterized into output, comprising:

4   receiving the source document;

5   receiving a layout data structure providing formatting properties specifying a layout and

6 format of the content output;

7   processing the source document and the layout data structure to determine formatting

8 properties, including page divisions, for the content in the source document;

9   generating multiple page objects, wherein each page object includes source content and

10 formatting properties for one page; and

11   transmitting the page objects to a rasterizer to transform into renderable information

12 capable of being generated by an output device.

1   2.   The method of claim 1, wherein the source document includes statements in a

2 first presentation language, further comprising:

3   transforming the source document and source content therein into a result document in a

4 second presentation language, wherein the result document includes the source content and the

5 formatting properties provided by the layout data structure, wherein the formatting properties

6 indicate page divisions of the content, and wherein the multiple page objects are generated from

7 the result document.

1   3.   The method of claim 2, wherein the layout data structure comprises a separate

2 document from the source document.

1   4.   The method of claim 2, wherein the first presentation language comprises the

2   Extensible Markup Language (XML) and wherein the second presentation language comprises

3   Extensible Stylesheet Language Formatting Objects (XSL-FO), and wherein the page layout

4   data structure comprises an XSL stylesheet.

1   5.   The method of claim 2, wherein the page objects include formatting properties

2   in a third presentation language.

1   6.   The method of claim 5, wherein the first presentation language comprises the

2   Extensible Markup Language (XML), wherein the second presentation language comprises

3   Extensible Stylesheet Language Formatting Objects (XSL-FO), wherein the third presentation

4   language comprises the Mixed Object Document Content Architecture (MO:DCA), and

5   wherein the layout data structure comprises an XSL stylesheet.

1   7.   The method of claim 5, wherein the third presentation language comprises a

2   page description language.

1   8.   The method of claim 2, wherein the page objects include content and formatting

2   properties in the second presentation language.

1   9.   The method of claim 2, wherein the second presentation language comprises

2   Extensible Stylesheet Language Formatting Objects (XSL-FO).

1   10.   The method of claim 1, wherein the page objects include content and formatting

2   properties in a device independent presentation language.

1   11.   The method of claim 1, wherein the source content is in a page description

2 language.

1   12.   The method of claim 1, wherein the source document and page objects include

2 the formatting properties in a same presentation language.

1   13.   The method of claim 1, wherein the page object includes content and formatting

2 properties for one page.

1   14.   The method of claim 1, wherein the source document does not indicate page

2 divisions for the content.

1   15.   A system for processing a source document in a structured document format

2 including elements providing source content to render, wherein the source content comprises

3 code that is rasterized into output, comprising:

4   means for receiving the source document;

5   means for receiving a layout data structure providing formatting properties specifying a

6 layout and format of the content output;

7   means for processing the source document and the layout data structure to determine

8 formatting properties, including page divisions, for the content in the source document;

9   means for generating multiple page objects, wherein each page object includes source

10 content and formatting properties for one page; and

11   means for transmitting the page objects to a rasterizer to transform into renderable

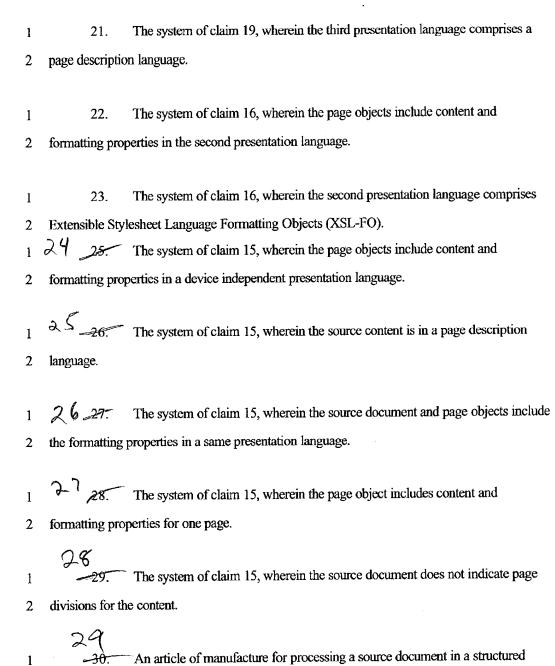12   information capable of being generated by an output device.

1   16.   The system of claim 15, wherein the source document includes statements in a

2 first presentation language, further comprising:

3   means for transforming the source document and source content therein into a result

4 document in a second presentation language, wherein the result document includes the source

5 content and the formatting properties provided by the layout data structure, wherein the

6 formatting properties indicate page divisions of the content, and wherein the multiple page

7 objects are generated from the result document.

1   17.   The system of claim 16, wherein the layout data structure comprises a separate

2 document from the source document.

1   18.   The system of claim 15, wherein the first presentation language comprises the

2 Extensible Markup Language (XML) and wherein the second presentation language comprises

3 Extensible Stylesheet Language Formatting Objects (XSL-FO), and wherein the page layout

4 data structure comprises an XSL stylesheet.

1   19.   The system of claim 15, wherein the page objects include formatting properties

2 in a third presentation language.

1   20.   The system of claim 19, wherein the first presentation language comprises the

2 Extensible Markup Language (XML), wherein the second presentation language comprises

3 Extensible Stylesheet Language Formatting Objects (XSL-FO), wherein the third presentation

4 language comprises the Mixed Object Document Content Architecture (MO:DCA), and

5 wherein the layout data structure comprises an XSL stylesheet.

1   21.   The system of claim 19, wherein the third presentation language comprises a

2   page description language.

1   22.   The system of claim 16, wherein the page objects include content and

2   formatting properties in the second presentation language.

1   23.   The system of claim 16, wherein the second presentation language comprises

2   Extensible Stylesheet Language Formatting Objects (XSL-FO).

1   24 ~~25.~~   The system of claim 15, wherein the page objects include content and

2   formatting properties in a device independent presentation language.

1   25 ~~26.~~   The system of claim 15, wherein the source content is in a page description

2   language.

1   26 ~~27.~~   The system of claim 15, wherein the source document and page objects include

2   the formatting properties in a same presentation language.

1   27 ~~28.~~   The system of claim 15, wherein the page object includes content and

2   formatting properties for one page.

1   28 ~~29.~~   The system of claim 15, wherein the source document does not indicate page

2   divisions for the content.

1   29 ~~30.~~   An article of manufacture for processing a source document in a structured

2   document format including elements providing source content to render, wherein the source
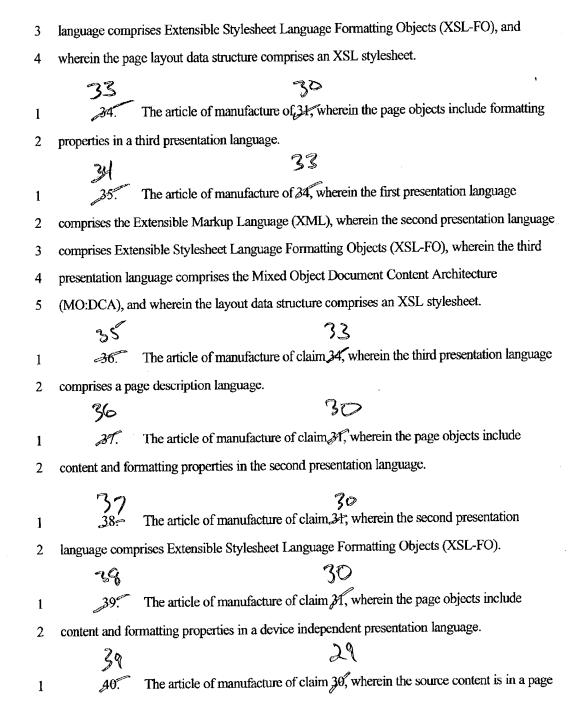
3   content comprises code that is rasterized into output, and wherein the article of manufacture

4   comprises code capable of causing a processor to perform:

5   receiving the source document;

6   receiving a layout data structure providing formatting properties specifying a layout and

7   format of the content output;

8   processing the source document and the layout data structure to determine formatting

9   properties, including page divisions, for the content in the source document;

10   generating multiple page objects, wherein each page object includes source content and

11 formatting properties for one page; and

12   transmitting the page objects to a rasterizer to transform into renderable information

13 capable of being generated by an output device.

30   29

1   31.   The article of manufacture of claim 30, wherein the source document includes

2   statements in a first presentation language, and wherein the code is further capable of causing

3   the processor to perform:

4   transforming the source document and source content therein into a result document in a

·5 second presentation language, wherein the result document includes the source content and the

6   formatting properties provided by the layout data structure, wherein the formatting properties

7   indicate page divisions of the content, and wherein the multiple page objects are generated from

8   the result document.

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1   32.   The article of manufacture of claim 31, wherein the layout data structure

2   comprises a separate document from the source document.

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1   33.   The article of manufacture of 31, wherein the first presentation language

2   comprises the Extensible Markup Language (XML) and wherein the second presentation

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3 language comprises Extensible Stylesheet Language Formatting Objects (XSL-FO), and

4 wherein the page layout data structure comprises an XSL stylesheet.

1 34. The article of manufacture of 31, wherein the page objects include formatting

2 properties in a third presentation language.

1 35. The article of manufacture of 34, wherein the first presentation language

2 comprises the Extensible Markup Language (XML), wherein the second presentation language

3 comprises Extensible Stylesheet Language Formatting Objects (XSL-FO), wherein the third

4 presentation language comprises the Mixed Object Document Content Architecture

5 (MO:DCA), and wherein the layout data structure comprises an XSL stylesheet.

1 36. The article of manufacture of claim 34, wherein the third presentation language

2 comprises a page description language.

1 37. The article of manufacture of claim 31, wherein the page objects include

2 content and formatting properties in the second presentation language.

1 38. The article of manufacture of claim 31, wherein the second presentation

2 language comprises Extensible Stylesheet Language Formatting Objects (XSL-FO).

1 39. The article of manufacture of claim 31, wherein the page objects include

2 content and formatting properties in a device independent presentation language.

1 40. The article of manufacture of claim 30, wherein the source content is in a page

2 description language.

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1   ~~41.~~ 29   The article of manufacture of claim ~~30,~~ wherein the source document and page

2   objects include the formatting properties in a same presentation language.

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1   ~~42.~~ 29   The article of manufacture of claim ~~30,~~ wherein the page object includes

2   content and formatting properties for one page.

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1   ~~43.~~ 29   The article of manufacture of claim ~~30,~~ wherein the source document does not

indicate page divisions for the content.